**Overview**

<table>
<thead>
<tr>
<th>Product name</th>
<th>MTT Assay Kit (Cell Proliferation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric</td>
</tr>
<tr>
<td>Sample type</td>
<td>Adherent cells, Suspension cells</td>
</tr>
<tr>
<td>Assay type</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Assay time</td>
<td>3h 15m</td>
</tr>
<tr>
<td>Species reactivity</td>
<td>Reacts with: Other species, Mammals</td>
</tr>
</tbody>
</table>

**Product overview**

MTT Assay Kit ab211091 provides an easy-to-use, non-radioactive, and high-throughput method for measuring cell proliferation, cell viability and cytotoxicity.

The MTT assay protocol is based on the conversion of water soluble MTT (3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) compound to an insoluble formazan product.

Viable cells with active metabolism convert MTT into formazan. Dead cells, on the other hand, lose this ability and therefore show no signal. Thus color formation serves as a useful and convenient marker of only the viable cells. The measured absorbance at OD 590 nm is proportional to the number of viable cells.

MTT assay protocol summary:
- replace serum-containing media with serum-free media and MTT reagent in cell cultures
- incubate for 3 hr at 37°C
- add MTT solvent and incubate for 15 min
- analyze with microplate reader

**Notes**

Review our cell health assay guide to learn about our kits to perform a cell viability assay, cytotoxicity assay or cell proliferation assay.

**Platform**

Microplate reader

**Properties**

**Storage instructions**

Store at -20°C. Please refer to protocols.
Cell proliferation is the multiplication or reproduction of cells, as a result of cell growth and cell division, resulting in the expansion of a cell population.

**Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>1000 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTT Reagent</td>
<td>1 x 50ml</td>
</tr>
<tr>
<td>MTT Solvent</td>
<td>1 x 150ml</td>
</tr>
</tbody>
</table>

**Relevance**

HeLa cells were grown in DMEM media supplemented with 10% FBS, harvested using trypsin and counted using Trypan blue and a hemocytometer. Cells were then serially diluted in a clear cell culture plate and incubated for 3 hours with MTT Reagent at 37°C. After incubation, cells were treated with MTT Solvent for 15 minutes at room temperature. Absorbance was measured at OD = 590 nm. Inset graph is an expanded segment of the assay data at lower cell number per well.

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